Marine Institute
Foras na Mara

COUNCIL DIRECTIVE 2006/88/EC
DISEASE INFORMATION LEAFLET

GYRODACTYLOSIS

BACKGROUND

- Gyrodactylosis is caused by *Gyrodactylus salaris*, a freshwater ectoparasite of Atlantic salmon. Commission Decision 2010/221/EU grants Ireland freedom from *G. salaris*.
- *G. salaris* is restricted in its distribution to Europe and has been reported in Scandinavia, Italy, Poland and Macedonia.
- It is mainly a disease of Atlantic salmon, however the parasite can survive and reproduce on other salmonid species such as rainbow trout, brown trout and Arctic char.
- All life stages of salmon are susceptible to the parasite, however mortality has only been reported in fry and parr. Mortality levels can average between 80 – 100%.
- *G. salaris* has spread between farms/rivers mainly through the movement of live fish. Migrating salmonid fish also play a role in disease spread.
- *G. salaris* is primarily a freshwater parasite but it can also survive some time in brackish water. The parasite is an obligate parasite with a direct life cycle and can only survive for a few days when detached from the host.

CLINICAL SIGNS

- Fish infected with low numbers of the parasite often exibit no clinical signs of disease.
- On Atlantic salmon, the parasite is mainly found on the fins but also occurs on the skin and occasionally on the gills.
- Infected fish often exhibit a flashing behaviour, rubbing the body against the substrate.
- Fish may appear grey in colour due to an overproduction of mucus and show varying degrees of fin erosion.

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DIAGNOSIS

- Differentiation of *G. salaris* from other non-pathogenic gyrodactylid parasites is a requirement of any diagnostic procedures.
- Direct detection of the parasite is performed using microscopic analysis of alcohol fixed fins. Microscopic analysis is based on morphological features of the attachment organ of the parasite.
- Indirect detection is performed using a range of molecular diagnostic methods.
- Histopathologically, the most consistent pathology is observed in the fins where numerous parasites can be observed depending on the infestation level.

CONTROL

- Control of the disease should focus on avoiding exposure to the parasite through effective hygiene and biosecurity measures.
- Biosecurity measures should include using fish from disease-free sources e.g. certified stocks from countries declared free of gyrodactylosis.
- The parasite is susceptible to a range of commonly used reagents, therefore bath treatments with high salinity water, formaldehyde and chlorine/iodine based compounds are effective.
- Once established in a river system the parasite has proven to be extremely difficult to remove.

WHAT SHOULD I DO?

- The Marine Institute must be notified in the event of unexplained mortality or the suspicion of a notifiable disease.
- Strict biosecurity measures should be implemented at and around the infected site, in collaboration with the Marine Institute and the retained veterinary practitioner.
- No movements of aquatic animals, whether dead or alive, are allowed without the authorisation of the official service.
- The Marine Institute will confirm or rule out the presence of a listed disease.
- If the presence of the disease is confirmed, aquaculture animals should be harvested/culled as soon as possible to avoid the spread of the disease.

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